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[10744/7600]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	Peter BAEUERLE
Serial No.	:	09/976,788
Filed	:	October 12, 2001
For	:	METHOD FOR OPERATING A TORQUE-CONVERTER LOCKUP CLUTCH FOR A HYDRODYNAMIC TORQUE CONVERTER AND CONTROL DEVICE FOR IMPLEMENTING THE METHOD
Group Art Unit	:	3661
Examiner	:	Brian J. Broadhead

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Date: August 15, 2005

Signature: [signature]

TRANSMITTAL

SIR:

Enclosed herewith for filing in the above-identified patent application is a Reply Brief Under 37 C.F.R. § 41.41

While no fee is believed due in connection with this paper, the Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to the deposit account of **Kenyon & Kenyon**, deposit account number **11-0600.**

Respectfully Submitted,
KENYON & KENYON

Dated: August 15, 2005

By: [signature]
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[10744/7600]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	Examiner: Brian J. Broadhead
Peter BAEUERLE	
For: METHOD FOR OPERATING A TORQUE-CONVERTER LOCKUP CLUTCH FOR A HYDRODYNAMIC TORQUE CONVERTER AND CONTROL DEVICE FOR IMPLEMENTING THE METHOD	Art Unit 3661
Filed: October 12, 2001	
Serial No.: 09/976,788	

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REPLY BRIEF UNDER 37 C.F.R. § 41.41

SIR:

Appellant submits the present Reply Brief in response to the Answer dated June 15, 2005.

REMARKS

Claims 1 to 31 stand finally rejected under 35 U.S.C. § 102(b) as unpatentable over U.S. Patent No. 5,029,087 ("Cowan et al.").

For at least the reasons set forth below and in the Appeal Brief, the rejection of claims 1 to 31 should be reversed.

As stated in the Specification, an advantage of the subject matter of the present application is that "by taking the input torque currently applied to the torque converter into consideration in selecting a current setpoint value for the slip of the torque-converter lockup clutch, the controller response can almost be simultaneously adjusted to changing operating parameters." Specification, p. 7, lines 27 to 32. In contrast, Cowan et al. specifically state that "[t]orque transients caused by engine operating variables, transmission shifting or throttle movements are . . . absorbed by momentary periods of increased slip as the bypass clutch solenoid output signal is adjusted." Col. 4, lines 5 to 11. Therefore, the system of Cowan et al. does not provide the benefit of the simultaneous adjustment of the controller response resulting from the reliance on input torque currently applied to the torque converter in selecting a current setpoint value for the slip of the torque-converter lockup clutch. Consistently, as indicated above, Cowan et al. state that their system results in momentary periods of increased slip.

Notwithstanding the above, the Answer asserts that that the language "taking into account" of claim 1 is very general and that Cowan et al. take torque into account because they use engine speed and throttle position in calculating slip, which are allegedly "indicators of engine output torque" and "directly related to engine output torque." The Answer is apparently drawing on facts within the personal knowledge of the Examiner, since no support was provided for these otherwise conclusory and unsupported assertions. The Answer only relies on the quoted sections of Cowan et al. below:

> The desired slip depends on information from a throttle position sensor, an engine speed sensor, a gear shift selector sensor, oil temperature sensor and transmission input shaft speed sensor whereby the bypass clutch capacity is adjusted to a value that is necessary to achieve the desired slip at any given torque.

Col. 3, line 67 to col. 4, line 5. However, just because slip is calculated for "any given torque" in no manner discloses or suggests that engine speed and throttle position are "indicators of engine output torque" or are "directly related to engine output torque."

The Answer further relies upon quoted section of Cowan et al. below:

> Torque transients caused by engine operating variables, transmission ratio shifting or throttle movements are then absorbed by momentary periods of increased slip as the bypass clutch solenoid output signal is adjusted during each background control loop of the processor in accordance with the new torque condition.

Col. 4, lines 5 to 11. However, just because the bypass clutch solenoid output signal is stated to be adjusted after a torque transient occurs during a background control loop and in accordance with the new torque condition in no manner discloses or suggests that engine speed and throttle position are "indicators of engine output torque" or are "directly related to engine output torque." The above quoted passage merely states that during a background control loop a torque transient might occur, which is absorbed by increased slip, and that adjustments are continued to be made in accordance with the new conditions present, which in this particular case is a new torque condition.

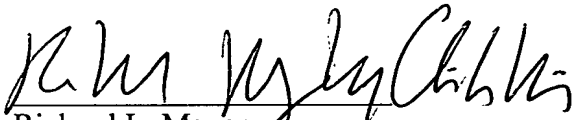
Further, even if engine speed and throttle position may indirectly be indicators of engine torque, Appellant maintains that Cowan et al. do not disclose taking into account current torque in selecting a setpoint value for slip. Appellant respectfully submits that if Cowan et al. intended to disclose taking into account torque in selecting a setpoint value for slip, Cowan et al. would simply have included input torque among the other variables they listed as being taken into consideration in calculating the setpoint value. Further, just because a listed variable, *e.g.*, the engine speed and throttle position, allegedly has a relationship with torque and thus, indirectly, allegedly is an "indicator of engine torque," in no way manner establishes that torque is "taken into account" in calculating slip, in the present context. It is clear from the Specification that the language "taken into account" means more than relying on a arbitrary variable that may in some manner have a relationship to torque. Rather, Appellants respectfully submit that one skilled in the art would have recognized that taking torque into account for selecting a setpoint variable for slip means directly using this torque value in selecting a setpoint value.

In this regard, the Specification states, for example, that in response to a change in input torque E of more than a specifiable tolerance deviation, slip of converter 1 is determined and used as a new initial value, as a basis for the time characteristic of setpoint value sw, which would occur in response to input torque E now being applied, when torque-converter lockup clutch 20 is completely opened. Specification, p. 13, lines 13 to 22. Cowan et al. make no mention of using a sensor to monitor torque to track for changes in its value or for any other purpose, for that matter.

The Answer further argues that because desired slip is calculated using actual slip, which may be effected by torque transients, torque is necessarily taken into account by Cowan et al. in adjusting the setpoint value. The Answer refers to col. 13, lines 9 to 11, which states that the desired slip = actual slip –(PCDEC"x")*(Actual slip-Target slip). Clearly, just because changes in the actual slip may be affected by torque transients in no manner establishes that torque is taken into account in calculating the desired slip or adjusting the setpoint value. Many variables may effect the actual slip of the clutch, for example, the material makeup of the clutch, but this does not mean that these variables are "taken into account" in adjusting the setpoint value.

For the foregoing reasons and for the reasons more fully set forth in the Appeal Brief, it is respectfully submitted that the final rejection of the pending claims should be reversed.

Respectfully submitted,
KENYON & KENYON

Dated: August 15, 2005 By: 

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